## LISTING OF THE CLAIMS

This listing of claims replaces all prior versions, and listings, of claims in the Application:

Claims 1-28 (Cancelled)

Claim 29. (Previously presented) A computer readable medium storing a set of instructions configured for execution by at least one processor for performing:

searching a knowledge base storing a plurality of classes of information in response to a query relating to a problem in a refinery crude oil process in a refinery, the information classes including:

crude oil characterizations,

crude oil processing parameters,

problems previously encountered during the refinery crude oil process, and

treatments for problems previously applied by refinery personnel;

accessing at least one information class in response the query; and

returning a result set in response to the query that includes information from the information classes; and

performing a refinery operation function based on the result set selected from the group consisting of assessing crude oil processing risk for the problem in the refinery crude oil processing, and applying a treatment for the problem in the refinery crude oil processing.

Claim 30. (Previously presented) The computer readable medium as defined in claim 29, wherein the information classes comprises:

a customer class containing information relating to an owner of the refinery;

a refinery class containing information relating to a type of the refinery;

a crude oil unit class containing information relating to a crude oil tank class and a slop tank class; and

an equipment unit class containing information relating to an equipment configuration sub-class and an equipment specification sub-class

Claim 31. (Previously presented) The computer readable medium as defined in claim 30, wherein the equipment unit class includes the equipment configuration class containing information relating to an arrangement of systems, subsystems and components of the collection of equipment; and further includes the equipment specification class containing design information relating to the refinery.

Claim 32. (Previously presented) The computer readable medium as defined in claim 30, wherein the crude oil unit class includes the crude oil tank class containing information relating to an amount of crude oil contained in a feedstock of the refinery; and the slop tank class containing information relating to an amount of slop contained in the feedstock of the refinery;

Claim 33. (Previously presented) The computer readable medium as defined in claim 29, wherein the information classes further comprise:

a product class containing information relating to a product produced by the refinery;

a production process class containing information relating to a set of operations performed to convert feedstock into the product; and

a slop class containing information relating to residual crude oil from a previous process run that is mixed with crude oil.

Claim 34. (Cancelled)

Claim 35. (currently amended) The computer readable medium as defined in ~~claim 34~~ claim 33, wherein the information classes further comprise:

a laboratory analysis class containing results of a performed chemical analysis on crude oil or the product.

Claim 36. (Previously presented) The computer readable medium as defined in claim 29, wherein the information classes further comprise:

an inspection report class containing information reported by an operator on a condition of refinery equipment;

a maintenance report class containing information reported by maintenance personnel on a repair performed on the refinery equipment;

an operational data class containing information relating to performance of the refinery equipment; and

a non-destructive testing class containing information collected from non-destructive testing.

Claim 37. (Previously presented) A method, comprising:

managing information stored within a knowledge management database, wherein the knowledge database includes information classes related at least to a refinery, a collection of equipment in the refinery operable to process crude oil feedstock into a product, and a set of operational parameters performable by a collection of equipment to produce the product:

disseminating information relating to the information class accessed in response to the a query;

returning a result set in response to the query that includes information from the information classes; and

performing a refinery operation function based on the result set selected from the group consisting of assessing crude oil processing risk for the problem in the refinery crude oil processing, and applying a treatment for the problem in the refinery crude oil processing

Claim 38. (Previously presented) A computer implementable system for performing a refinery operation function, comprising:

means for storing a plurality of classes of information and for providing a result set in response to a query relating to a problem in a refinery crude oil process in a refinery, the information classes including:

crude oil characterizations,

crude oil processing parameters,

problems previously encountered during the refinery crude oil process, and

treatments for problems previously applied by refinery personnel;

means for accessing at least one information class in response the query; and

means for returning a result set in response to the query that includes information from the information classes; and

means for performing a refinery operation function based on the result set selected from the group consisting of assessing crude oil processing risk for the problem in the refinery crude oil processing, and applying a treatment for the problem in the refinery crude oil processing.